Seat No.: _____ Enrolment No._____

GUJARAT TECHNOLOGICAL UNIVERSITY

BE - SEMESTER–VII(OLD) • EXAMINATION – WINTER 2016

Subject Code: 171302 **Date: 21/11/2016**

Subject Name: Air Pollution Control and Management

Time: 10:30 AM to 01:00 PM **Total Marks: 70**

Instructions:

1. **Attempt all questions.**
2. **Make suitable assumptions wherever necessary.**
3. **Figures to the right indicate full marks.**

Q.1	**(a)**	Enlist which pollutants are affects the ambient air quality? Explain in brief.	**07**
	(b)	Discuss Auto exhaust emission in detail.	**07**
Q.2	**(a)**	Write a short note on Effects of Air to Fuel ratio in automobile with respect to emission.	**07**
	(b)	Discuss recent engine design changes and fuel for control of auto exhaust emission	**07**
		OR	
	(b)	Write a short note on Turbojet Engine.	**07**
Q.3	**(a)**	Discuss the Double alkali scrubbing for SO_2 control with neat sketch.	**07**
	(b)	Discuss the Single Alkali Scrubbing for SO_2 control with neat sketch.	**07**
		OR	
Q.3	**(a)**	Enlist the types of fuels with their sulfur contents. Calculate the SO_2 emission in each case per tone of fuel burning.	**07**
	(b)	Write a short note on Magnesium Oxides scrubbing method for control of SO_2 with neat sketch.	**07**
Q.4	**(a)**	Write a short note on combustion control methods for NOx.	**07**
	(b)	Explain working principle of cyclone separator with neat sketch.	**07**
		OR	
Q.4	**(a)**	Discuss control of particulate matter in bag filter and explain its cleaning mechanisms with sketch.	**07**
Q.4	**(b)**	Explain advantages, disadvantages and applications of Electro Static Precipitator.	**07**
Q.5	**(a)**	Write a short note on venturi scrubber and Absorption Tower.	**07**
	(b)	Enlist and Explain selection criteria for Air Pollution Control Equipment.	**07**
		OR	
Q.5	**(a)**	What is Photochemical Smog? Explain in detail.	**07**
	(b)	Discuss the role of oxides of nitrogen in photo oxidation.	**07**

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